

### REMARKS

Applicant has reviewed and considered the Office Action dated October 27, 2003, and the references cited therewith.

No claims are amended, canceled, or added; as a result, claims 1-66 remain pending in this application.

#### Information Disclosure Statement

An information disclosure statement was filed on August 7, 2003 and returned to the Applicant indicating that the art was considered on October 17, 2003. A particular document appearing on the bottom of page 1 (of 2) of Form 1449 does not bear initials indicating that the art was considered. Applicant respectfully requests that the Examiner positively indicate, in the next communication, that the art was considered.

#### §103 Rejection of the Claims

Claims 1-11, 16-22, 24, 25, 27-33, 36-38, 57, 58, 60, and 63 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Vaughn Jr. (U.S. patent 5,557,247, hereinafter "Vaughan") in view of Srinivasan et al. (U.S. patent 6,029,082, hereinafter "Srinivasan '082").

Applicant respectfully traverses the rejection and submits that *prima facie* obviousness has not been established because, *inter alia*, the Office Action does not include a showing that the proposed combination teaches or suggests all elements recited in the claims. For example, as to claims 1, 16, 20 and 60, the Office Action asserts that "Srinivasan discloses an aperture formed by the removal of current elements . . . ." Applicant respectfully traverses and notes that Srinivasan '082 does not teach or suggest current elements and consequently, is incapable of disclosing removal of same. In particular, Srinivasan '082 refers to conductors or legs but provides no discussion of a current element as described in the present application and recited in the claims.

Thus, Applicant respectfully submits that the proposed combination of Vaughan and Srinivasan '082 does not teach or suggest all elements recited in the claims.

In addition, Applicant respectfully traverses the rejection and submits that *prima facie* obviousness has not been established because, *inter alia*, evidence for a suggestion to combine is not of record.

The Office Action must provide specific, objective evidence of record for a finding of a suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. *In re Sang Su Lee*, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

As to claims 1, 16, 20 and 60 the Office Action asserted that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Srinivasan teachings about the removal of a current element with Vaughn's apparatus for the purpose of reducing the patient's claustrophobia and permit access to the patient." Applicant respectfully submits that the assertion is a conclusory statement of subjective belief and therefore, it appears that the Office Action has not provided objective evidence for a suggestion or motivation to combine Vaughan and Srinivasan '082. The Office Action has not identified a particular teaching in either Vaughan or Srinivasan '082 which includes a suggestion of the desirability of pursuing the proposed combination.

Furthermore, Applicant submits that Vaughan and Srinivasan '082 rely on different principles of operation and to combine in the manner proposed would frustrate one or the other. For example, Fig. 4 of Srinivasan '082 illustrates a partial circuit diagram and includes conductors labeled with reference numerals 90 and 92 which carries the current in each leg 94. Fig. 4 appears to show that if the end rings 90 and 92 of Srinivasan '082 were to be removed, then no current would flow in each leg 94 and the Srinivasan '082 device would be inoperative. In contrast, Vaughan recites "transmission line elements" and "conductors . . . AC coupled to each other by a dielectric therebetween." (*Column 12, lines 55-57*). In Vaughan, an end ring is not required for current flow in the transmission line elements.

The birdcage nature of Srinivasan '082 is noted at column 5, lines 50-54, where it is stated that ". . . the less-claustrophobic insert coil 40 of the preferred embodiment is designed to be converted from a conventional sixteen-leg high-pass birdcage coil . . . " In contrast to the modified birdcage coil of Srinivasan '082, Vaughan refers to a TEM resonator. In addition, Vaughan refers to a distributed impedance network (see column 16, lines 1-2) whereas

Srinivasan '082 refers variously to "end rings have a fixed capacitance . . . between each pair of leg conductors . . . " (*Abstract*). The background section of Vaughan describes the differences in principles of operation between lumped element designs and distributed element designs. For these and other reasons, Applicant respectfully submits that the different principles of operation of Vaughan and Srinivasan '082 preclude combining as proposed without substantial alteration of one or the other.

The Federal Circuit decision of *In re Dembiczak* (50 USPQ2d 1614, 1617, Fed. Cir. 1999) requires that the teaching, motivation, or suggestion to select and combine references must be "clear and particular." As to the rejection of the instant application, Applicant submits that the required clear and particular showing is missing. The record does not include clear evidence of such motivation. Furthermore, the record is devoid of particular evidence supporting the proposed combination. Accordingly, Applicant submits that *prima facie* obviousness has not been established.

As to independent claim 2, Applicant respectfully traverses the rejection and submits that the Office Action does not appear to set forth cogent reasoning in support of combining Vaughan and Srinivasan '082. Applicant finds no explanation or citation to an authority for pursuing the proposed combination.

As to independent claims 9 and 18, the Office Action asserts that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Srinivasan teachings about the removal of a current element with Vaughan's apparatus for the purpose of reducing the patient's claustrophobia and permit access to the patient." Applicant respectfully traverses and notes that the Office Action does not identify the source of the asserted motivation to pursue the proposed combination. Indeed, Applicant notes that Srinivasan '082 alone purports to achieve the purpose of "reducing the patient's claustrophobia and permit access to the patient" without need to combine with Vaughan. Thus, it appears that Srinivasan '082 provides no motivation to combine with Vaughan and the Office Action does not explain why one of skill in the art would select Vaughan for combining with Srinivasan '082.

As to dependent claims 3-8, 10, 11, 17, 19, 21, 22, 24, 25, 27-33, 36-38, 57, 58, 63, Applicant submits that each is believed to distinguish over the references alone or combined for at least the same reasons as the independent claims from which they depend.

For these and other reasons, Applicant submits that *prima facie* obviousness has not been established. Reconsideration and allowance of claims 1-11, 16-22, 24, 25, 27-33, 36-38, 57, 58, 60, and 63 is respectfully requested.

Claims 12-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vaughan in view of Srinivasan et al. (U.S. patent 5,543,711, hereinafter "Srinivasan '711").

Applicant respectfully traverses the rejection and submits that *prima facie* obviousness has not been established because, *inter alia*, the Office Action does not include evidence of clear and particular motivation for pursuing the proposed combination. For example, as to claim 12, the Office Action asserts that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Srinivasan teachings about the removal of a current element with Vaughan's apparatus for the purpose of reducing the patient's claustrophobia and permit access to the patient." Applicant respectfully traverses and notes that the Office Action does not identify the source of the asserted motivation to pursue the proposed combination. Indeed, Applicant finds no discussion in Srinivasan '711 concerning patient claustrophobia. As to "permit access," Applicant notes that neither Srinivasan '711 nor Vaughan are said to preclude access to the patient and therefore, the assertion concerning "to permit access" does not appear to justify the selection of Vaughan or Srinivasan '711 for the proposed combination.

As to dependent claims 13-15, Applicant submits that each is believed to distinguish over the references alone or combined for at least the same reasons as the independent claim from which they depend.

For these and other reasons, Applicant respectfully submits that *prima facie* obviousness has not been established. Reconsideration and allowance of claims 12-15 is respectfully requested.

Claim 61 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Vaughan in view of Srinivasan and further in view of Yui (U.S. patent 5,892,359, hereinafter "Yui"). Applicant is unclear if the intended document is Srinivasan '082 or Srinivasan '711. Clarification is respectfully requested.

Notwithstanding the ambiguity, Applicant respectfully traverses the rejection and submits that *prima facie* obviousness has not been established because the addition of Yui does not address the shortcomings noted above concerning *prima facie* obviousness as to independent claim 1, from which claim 61 ultimately depends. In particular, the Office Action has not established how Yui provides a motivation or suggestion to combine Vaughan and either Srinivasan or, even if Vaughan and either Srinivasan could be properly combined, how Yui provides a motivation or suggestion to combine with Vaughan and either Srinivasan.

The Office Action asserts that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Yui's teachings about a mirror in the antenna NMR system with Vaughan and Srinivasan's apparatus for the purpose of reducing the claustrophobia of the patient." Applicant respectfully traverses and notes that the Office Action does not identify the source of the asserted motivation to pursue the proposed combination. Indeed, Applicant finds no discussion in Yui concerning patient claustrophobia. To the extent the Office Action does not clearly identify the document described as Srinivasan, Applicant notes that Srinivasan '711 appears to be silent as to claustrophobia and Srinivasan '082 already purports to achieve reduced claustrophobia. Regardless of whether Srinivasan '711 or Srinivasan '082 is the intended citation, the Office Action has not justified the selection of the cited documents. Consequently, Applicant submits that the asserted motivation to pursue the proposed combination is inadequate to establish *prima facie* obviousness.

In addition, Applicant respectfully notes that Yui does not appear to relate to radio frequency coils. In particular, it appears that Yui relates to gradient coils which are distinguishable from radio frequency coils. Consequently, it appears that Yui is non-analogous art and therefore, to combine in the manner proposed is improper.

Applicant respectfully submits that *prima facie* obviousness has not been established. Clarification of the rejection or reconsideration and allowance of claim 61 is respectfully requested.

Claim 64 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Vaughan, Srinivasan and Yui and further in view of Ziarati (U.S. patent 5,877,732, hereinafter "Ziarati").

Notwithstanding the previously noted ambiguity as to which Srinivasan is intended, Applicant respectfully traverses the rejection and submits that *prima facie* obviousness has not been established. In addition to the remarks above, Applicant respectfully submits that the addition of Ziarati to the proposed combination of Vaughan, Srinivasan, Yui does not address the shortcomings noted above concerning *prima facie* obviousness as to independent claim 9, from which claim 64 ultimately depends. For example, Ziarati does not appear to teach a transmission line segment, as recited in claim 9. In addition, the Office Action has not established how Ziarati provides a motivation or suggestion to combine Vaughan, Srinivasan and Yui or, even if Vaughan and Srinivasan and Yui could properly be combined, how Ziarati provides a motivation or suggestion to combine with Vaughan, Srinivasan and Yui. In the absence of such a showing, Applicant respectfully submits that the proposed combination does not establish *prima facie* obviousness.

The Office Action asserts that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to Ziarati's teaching about the communication system with Vaughan, Srinivasan and Yui's apparatus for the purpose of enabling the communication between surgeon and patient to facilitate the MR procedure." Applicant respectfully submits that the Office Action has not identified the source of such reasoning. In addition, Applicant respectfully submits that Ziarati alone purports to enable communication and therefore, it appears that there is no motivation to combine Ziarati with any of the cited art. Furthermore, the Office Action has not set forth clear and particular grounds for pursuing the proposed combination.

In addition, Applicant respectfully notes that Ziarati does not appear to relate to radio frequency coils. In particular, Ziarati appears to relate to a video and audio system. Consequently, it appears that Ziarati is non-analogous art and therefore, to combine in the manner proposed is improper.

Applicant respectfully submits that claim 64 is dependent on a claim believed to be in condition for allowance. Consequently, it is believed that claim 64 is in condition for allowance.

Clarification of the rejection or reconsideration and allowance of claim 64 is respectfully requested.

Allowable Subject Matter

Claims 23, 26, 34, 35, 39-56, 59, 62, 65, and 66 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant respectfully submits that the pending claims are in condition for allowance. Reconsideration of the objected to claims in light of the remarks herein is respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 373-6911) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

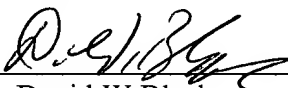
Respectfully submitted,

J. THOMAS VAUGHAN ET AL.

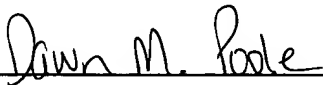
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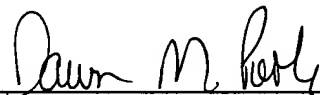
Date January 27, 2004

By   
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